RCA Amateur Radio Club
Indianapolis, IN

ARRL Affiliated Club

www.w9rca.org

THE NEXT MEETING OF THE RCA AMATEUR RADIO CLUB WILL BE TUESDAY, NOVEMBER 8th, 6:30 PM AT NORTH SIDE EVENTS, FORMERLY THE KNIGHTS OF COLUMBUS, 2100 EAST 71st, INDIANAPOLIS, IN

RCA ARC NEWS

OCTOBER MEETING SUMMARY – Thanks to all who attended the October meeting. Because of a mention of a new 2m receive antenna being needed for the '88 repeater system in our newsletter, the details of the downtown receive site at IVY Tech were discussed. One member has inquired how he could make a donation for the purchase of a new antenna. Thanks for your generosity. The Club has funds to cover this. We've done quite well selling stuff (junk) at the Indy Hamfest over the last few years. We're waiting for the official Field Day results to be in the December QST. Members of the RCA ARC were part of the Indy United Field Day group, W9SU, operating in the 3A class. The GOTA station used the W9RCA call sign. Dave, N9KZJ, is looking for a pair of 813s. Otherwise, a discussion ensued about the antenna system being constructed by Jim, WB8FAX.

AMATEUR RADIO LICENSE TEST SESSION

Date: **Saturday, November 12, 2022**
Time: Starting at Noon **by appointment only**.
Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd
Indianapolis, IN 46254-2407
Contact: Jim Rinehart, K9RU email: kj9ru@arrl.net Ph: 317 721-1458

Required: FCC FRN and a completed NCVEC 605 license application form.

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Salvation Army Open Net, Thursday, 7PM, W9RCA repeater, 146.88 MHz, tone 88.5 HZ

Nov 5-7	ARRL SS CW http://www.arrl.org/sweepstakes
Nov 10	ARRL Frequency Measuring Test https://fmt.arrl.org/docs/FMT-202211-Notice.pdf
Nov 12-13	WAE RTTY https://www.darc.de/der-club/referate/conteste/wae-dx-contest/en/
Nov 19-22	ARRL SS SSB http://www.arrl.org/sweepstakes
Nov 19-20	Ft Wayne Hamfest, Allen County War Memorial Coliseum, 4000 Parnell Ave., Fort Wayne, IN 46801, http://www.acarts.com/hfmain.htm
Nov 26	Wabash Valley ARA Turkey Fest, Clay County 4-H Fairgrounds, 6550 North State Road 59, Brazil, IN, https://www.w9uuu.org/hamfest.php
Dec 2-4	ARRL 160M Contest http://www.arrl.org/160-meter
Dec 10-11	ARRL 10M Contest http://www.arrl.org/10-meter

WA7BNM expanded contest calendar, https://www.contestcalendar.com/contestcal.htm

ARRL FOUNDATION ACCEPTING APPLICATIONS FOR GRANTS AND 2023 SCHOLARSHIPS

The ARRL Foundation is now accepting applications for grants to amateur radio organizations and for its 2023 Scholarship Program.

The grants program awards limited funding to organizations for eligible amateur radio related projects and initiatives, particularly those with a focus on educating, licensing, and supporting amateur radio activities. Youth-based projects and initiatives are especially encouraged. The ARRL Foundation grants program accepts proposals on a cyclical model three times a year, in February, June, and October. Proposals for the October grant period are being accepted through October 31. Awardees will be notified approximately one month after the closing of each cycle.

Additional information and a link to the grant application can be found at www.arrl.org/amateur-radio-grants.

The ARRL Foundation Scholarship Program will award more than 100 scholarships to deserving radio amateurs pursuing higher education. Individual scholarships range from $500 - $25,000. All applicants must be active, FCC-licensed amateur radio operators and submit a completed online application by 12 PM Eastern Time on January 4, 2023. Active foreign amateur radio operators are eligible for the Amateur Radio Digital Communications (ARDC) scholarships.

For the 2023 scholarships, the ARRL Foundation will be utilizing the same Scholarship Management Platform that was used for the 2022 scholarships. ***Transcripts and additional required documents must be submitted with the application*** and not emailed separately. A number of scholarships require additional documents, such as a letter of recommendation from a sitting Officer of an ARRL Affiliated Club. ***Applications without accompanying transcripts and additional required documents (if applicable) will not be considered.***

The ARRL Foundation Scholarship Committee will review all applicants for eligibility and award decisions. Scholarship recipients will be notified in May 2023 via USPS and email. Awards are mailed directly to recipients' schools. Additional information and a link to the application can be found at www.arrl.org/scholarship-program.

The ARRL Foundation administers programs to support the amateur radio community, and was established in 1973 by ARRL The National Association for Amateur Radio®.

STUDENT RADIO CONTACT WITH THE INTERNATIONAL SPACE STATION INSPIRES HURRICANE-HIT COMMUNITY

Students from Canterbury School in Fort Myers, Florida, were able to spend a few minutes on Monday, October 24, 2022, talking with Astronaut Josh Cassada, KI5CRH, onboard the International Space Station (ISS) using ham radio.

The radio contact, arranged by the Amateur Radio on the International Space Station (ARISS) program, provided hope for a community devastated by Hurricane Ian. School officials estimated that 30% of the school's faculty, staff, and families were left homeless after the hurricane passed through their area.

The contact was made just after 1:30 PM EDT, and students were able ask Astronaut Cassada questions ranging from, "Is the sun brighter in outer space?" to "What's your favorite meal?" The contact lasted just over 10 minutes, when the ISS was over the Caribbean Sea.

Members of the Fort Myers Amateur Radio Club, an ARRL Special Service Club, supported the school by providing students with technical instruction and radio equipment. The club's call sign, W4LX, was used to operate the ground station that established and maintained the contact with the ISS. The school used a Kenwood TS-2000 transceiver for the event. Several students built a satellite tracking antenna system capable of locking onto and tracking a satellite while in range to receive the ISS signal.

An ARISS news release described that as the students were preparing for the big day, "they saw the first pictures of Hurricane Ian, as seen from the ISS, bearing down on the coast of Florida. Evacuations were ordered in advance of the catastrophic winds and storm surges, which eventually affected many of the homes of students, faculty, and staff. In the wake of this destruction, it was uncertain whether the ARISS contact could occur. However, if only for a moment of reprieve from their loss and destruction, the entire Canterbury school community, including the school's staff/faculty, amateur radio operators, students and students' families, decided to pull together to support the ARISS contact and thereby renew their sense of hope and inspiration in human space exploration."

The Fort Myers Amateur Radio Club website has a link to a video of their entire contact with the ISS.

ARRL The National Association for Amateur Radio® is an ARISS sponsor.

PROPOSALS SOUGHT FOR AMATEUR RADIO CREW CONTACTS FROM THE INTERNATIONAL SPACE STATION

Amateur Radio on the International Space Station (ARISS) is seeking formal and informal education institutions and organizations, individually or working together, to host an amateur radio contact with a crew member onboard the International Space Station (ISS) in 2023.

Organizations that want to participate will need to submit a proposal no later than November 13, 2022. ARISS is looking for proposals that will draw large numbers of participants and integrate into a well-developed education plan. To assist with the proposals, ARISS has posted information about expectations and guidelines on their website. In addition, an ARISS Proposal Webinar session will be held on October 13, 2022, at 8:00 PM ET. The Eventbrite link to sign up for the webinar is https://ariss-proposal-webinar-fall-2022.eventbrite.com.

ARISS anticipates holding the contact between July 1 and December 31, 2023. Crew scheduling and ISS orbits will determine the exact radio contact dates. Crew members aboard the ISS will participate in scheduled amateur radio contacts approximately 10 minutes in length, and they'll allow students to interact with the astronauts through a question-and-answer session.

An ARISS contact is a voice-only communication opportunity via amateur radio. It takes place between astronauts and cosmonauts aboard the space station, and classrooms and communities. ARISS contacts afford education audiences an opportunity to learn firsthand what it's like to live and work in space. Such contacts provide the chance to learn about space research conducted on the ISS. Students will also have an opportunity to learn about satellite radio communication, wireless technology, and radio science.

Amateur radio organizations around the world, with the support of NASA and space agencies in Canada, Japan, Europe, and Russia, present educational organizations with this opportunity. The ham radio organizations' volunteer efforts provide much of the equipment and operational support that enables communication between the ISS crew and students around the world.

ARISS is a cooperative venture of international amateur radio societies and the space agencies that support the ISS. In the US, sponsors are the Radio Amateur Satellite Corporation (AMSAT), ARRL The National Association for Amateur Radio®, the ISS National Laboratory Space Station Explorers, Amateur Radio Digital Communications (ARDC), and NASA's Space Communications and Navigation (SCaN) program. The primary goal of ARISS is to promote exploration of science, technology, engineering, the arts, and mathematics topics. For more information about ARISS, visit their website at www.ariss.org.

BOOST FOR MAKING TESLA LAB A GLOBAL SCIENCE CENTER

Designed by the noted architect Stanford White at the turn of the previous century and a welcoming place today for scientists, historians and amateur radio operators, the former laboratory of 20th century innovator Nikola Tesla has been chosen to receive a $500,000 grant from the National Parks Service and the National Endowment of the Arts. The funds will be used to help pay for restoration of the Long Island, New York property and transform it into a museum and educational science center honoring the spirit of Tesla's groundbreaking work.

Known as Wardenclyffe Lab, it became the home to many of Tesla's discoveries in radio and other aspects of technology. He had created the Long Island lab as a kind of "radio city" with the goal of transmitting electricity and information wirelessly. The site was especially well-known for a transmitter tower that was 187 feet high above ground and reached 120 feet below ground level. That tower is long since gone.

This is Tesla's only surviving laboratory and it is a landmark, having been added to the US National Historic Register in 2018. Amateur radio has an active interest in the property as well and the site recently hosted the 75th anniversary celebration and special event station of the Suffolk County Radio Club. --AR Newsline

BOOK SHOWCASES QSL CARDS' DESIGN AND TYPOGRAPHY

The legacy of Charles Hellman, W2RP, continues. At the time Charlie became a Silent Key in 2017, the 106-year-old New York amateur was considered the oldest amateur in the US and likely the longest licensed. Active almost right up to the year he died, Charlie amassed a collection of QSL cards that, so many years later, is now carrying a different message to the world, one about graphic design and communication between people.

One hundred fifty cards in Charlie's collection, which were later purchased by a designer visiting a local antique shop, are now the subject of a soon-to-be published book on typography and graphics. Its title: "QSL: Do you Confirm Receipt of My Transmission?" The collection's owner, Roger Bova, made the cards available to Standards Manual, an independent publisher in Brooklyn, New York that specializes in books about design history. The book features the simple, bold design of the card from RBØHZ, confirming a 1986 contact on 20m, SSB. In contrast, there is a whimsical, cartoonish card from DM3EJ for a 1979 SSB contact on 10m. Many of the pages are full and rich and colorful.

The publisher's co founder, Jesse Reed, told PrintMag.com in a recent interview that the cards are as much a study in design as in communication in the age before the internet took hold. They are presented, in the book, in chronological order.

No doubt Charlie, a retired New York City educator, might be pleased to know he is still providing a means for people everywhere to expand their knowledge. --Jack Parker W8ISH via Newsline

CENTRAL STATES VHF SOCIETY CELEBRATES 54 YEARS

The Central States VHF Society (CSVHFS), the oldest group in the country devoted to weak signal VHF, held their 54th annual conference on July 21 - 23, 2022. Over 130 amateurs attended the event, which was held in La Crosse, Wisconsin.

This year's conference highlighted the recent activity with 222 MHz Worked All States (WAS), as well as the Fred Fish Memorial Award (FFMA), the VHF Spring Sprints, and the year-long competition, States Above 50 MHz.

The Wilson Award recognizes service to CSVHFS or VHF in general, and was presented to Peter Van Horne, KA6U. For the past two summers, Van Horne has been traveling the country, activating states via EME (Earth-moon-Earth) on 144, 222, 432, and 1296 MHz. His efforts resulted in six stations completing WAS on 222 MHz in the past year.

The John T. Chambers Award for Technical Achievement was presented to Dave Olean, K1WHS, for his many years at Directive Systems and Engineering in Haymarket, Virginia. Olean has been active in the chase for 222 MHz WAS and has been instrumental in promoting activity on the band.

222 MHz WAS award recipients in attendance for the award presentation were: Charlie Betz, N0AKC; Dave Kerl, N9HF; Joel Harrison, W5ZN; John Swiniarski, K1OR; Ed Gray, W0SD; Marc Thorson, WB0TEM; Dave Olean, K1WHS, and Marshall Williams, K5QE.

FFMA recipients attending the conference were Ralph Smith, W4UDH; Jim Spence, KO9A; John Feltz, W9JN, and Greg Clausen, W0LGQ.

More information about CSVHFS is available on their website, www.csvhfs.org.

ACTIVITY AND AWARDS INCREASE AT 222 AND 1296 MHZ

Interest in ARRL VHF and above Worked All States Awards (WAS) continues its flurry of activity, now on the 1296 MHz band.

As we reported in ARRL News in January, there have been several new-generation additions to the Worked All States Awards, now at 222 MHz (1.25 Meters) and at 1296 MHz (23 cm).

The original rush to 1.25 Meters WAS began in the early '80s with the first 10 WAS Awards. More recently, the 1.25 Meters WAS ranks have grown to 16, with recent achievers including: #13 John Swiniarski, K1OR, of Pelham, NH; #14 David Kerl, N9HF, Ormond Beach, FL; #15 Ray Rector, Jr., WA4NJP, Gillsville, GA; and #16 Charles Betz, N0AKC, Eau Claire, WI.

An energized pool of rovers activating rare states at both 222 and 1296 MHz have recently contributed to the chase - with the addition of four new 1296 MHz WAS Award recipients: in early September, 1296 MHz WAS Award #4 was awarded to Frank Potts, NC1I, of Southwick, MA; in late September, WAS Award #5 was awarded to Vlada Masek, OK1KIR, of the Czech Republic; and also in late September, WAS Award #6 was issued to HB9Q (DX Group HB9CRQ) in Switzerland. In late October, Zdeneck Samek, OK1DFC (also in the Czech Republic) was awarded WAS Award #7.

Recent award efforts accentuated a 14-year history of increased activity on the band, starting in the summer of 2007, when 1296 MHz WAS Award #1 was achieved by Al Ward, W5LUA, followed by Jay Liebmann, K5JL, who achieved 1296 MHz WAS Award #2. In August 2021, Al Katz, K2UYH, earned WAS Award #3 (Katz is known worldwide for supporting the EME -- Earth-Moon-Earth -- community with his 432 and Above EME Newsletter from 1995 to present, as well as earning the first 432 MHz Worked All Continents [WAC] Award in 1976).

Many 23-centimeter operators have benefitted from the flurry of portable and rare state activations during the past 2 decades, by Gary Perryman, WA5WCP, and Pete Van Horne, KA6U (activating rare States Nationwide); Gene Shea, KB7Q, and Gary Lauterbach, K6MG (activating Western States); and the NC1I team (activating States throughout New England).

"These rover operations substantially benefitted DX Stations, including the likes of OK1KIR, HB9Q (known for many things VHF+, including their EME scheduling/logger page); and OK1DFC (well known for his Septum Parabolic Dish Feeds and other Microwave-Band support hardware, detailed on QRZ)," said ARRL Radiosport Manager Bart Jahnke, W9JJ. "It is important to realize that these DX-location 1296 MHz WAS Award winners had to contact all 50 states via Moon bounce."

"The new class of 222 and 1296 MHz WAS Award recipients sought these awards often during efforts of several decades, and as such they deserve recognition. Congratulations to all of the newest 222 and 1296 MHz WAS Award recipients on their extraordinary accomplishments," said Jahnke. "Heartfelt thanks to those rovers and support groups who continue to help make these EME and beyond-line-of-sight contacts happen!"

For more information on the Worked All States Awards, visit www.arrl.org/was.

Thanks to ARRL Radiosport Manager Bart Jahnke, W9JJ for information included in this story.

CALL FOR INSTRUCTORS

ARRL is embarking on a journey of training for club officers and members. The new club development webinar series will include live Q&A, and the live sessions will be available to everyone. The webinars will be recorded and available to ARRL members through the ARRL Learning Center. We're looking for ARRL members to help us produce, create, and deliver the webinars.

The purpose of this program is to offer a series of short webinars that offer training for the skills needed to build and run a successful club. Topics will include leadership, activities, finance, and recruiting. Envisioned is a series of 10 or more webinars, all lasting from 20 to 30 minutes.

The hope is that club officers and members will view the series as an opportunity to learn from others that have been able to put those skills to use. To do this, we need the help of membership. We're looking for instructors to help with building the training. We're also looking for members that can present in a standard format and have the skills necessary to do the training. If this sounds like something that you are interested in, please contact Mike Walters, W8ZY, at mwalters@arrl.org for further details. We hope to start this series in late January 2023.

FCC SEEKS ELECTRONIC ENGINEERS FOR HONORS PROGRAM

The Federal Communications Commission (FCC) announced this week that it is opening a new window for applications under its Honors Engineer Program. The one-year developmental program may lead to a term or permanent appointment. The Commission is accepting applications from recent graduates with an engineering degree and current students graduating in December 2022.

Among the duties included in the job description is training to perform “propagation analysis of terrestrial, satellite and/or airborne systems or evaluating the emission characteristics of various transmitters to validate the co-existence with neighboring systems. Projects may also involve various computer software engineering and scientific applications."

An FCC news release describes that honors engineers will work alongside senior staff on projects, including:

- Developing technical rules and policy approaches to enable the U.S. to introduce new communications technologies and services such as 5G, 6G, advanced Wi-Fi, the Internet of Things, next-generation TV broadcasting, and new broadband satellite systems;
- Facilitating wireless and wireline broadband service deployment throughout the nation, including to rural and underserved areas;

- Identifying technologies to improve access to communications services for all Americans, especially those with disabilities;
- Enabling public safety and homeland security agencies as well as various enterprises within various market sectors such as health care, energy, education, and transportation to introduce new communications technologies; and
- Developing policies that encourage innovation and investment in and transitions to new communications technologies, devices, and services that will support job creation and economic growth.
- "Engineers are deployed throughout the FCC, and from space innovation to new broadcast standards to 6G and beyond, the FCC's policy portfolio is filled with interesting and challenging engineering work," said FCC Chairwoman Jessica Rosenworcel. "Our Honors Engineer program is a unique opportunity for the newest engineers to work closely with experienced professionals in this field to ensure that the FCC is best prepared to face the challenges of next-generation communications networks."

  The announcement will close once 175 applications have been received or on December 2, 2022; whichever occurs first. Visit USAJOBS for the complete position summary and to apply, at www.usajobs.gov/job/685101100.

SHORTS

Yaesu FT-710 AESS Demonstration with John Kruk, N9UPC
https://www.youtube.com/watch?v=K6Ft_qCrvxk

Arecibo Observatory to Be Replaced by Education Center – National Science Foundation opts not to rebuild iconic radio telescope that collapsed in 2020

WANT TO TRY SDR BUT AREN'T SURE WHERE TO START? Here is a video by HB9BLA that gives some good inexpensive ways to get started: https://www.youtube.com/watch?v=7eNGBmVquug

STUDENTS IN UKRAINE AWAIT THEIR SATELLITE'S LAUNCH – Students at the Igor Sikorsky Kyiv Polytechnic Institute in Ukraine are looking forward to the November launch of an educational satellite they built with a group of space-exploration enthusiasts. The students' Cubesat is designed to work on a variety of scientific and technical issues related to research at the institute's school, the National Technical University of Ukraine.

The Cubesat, QBUAØ1, will be in a sun-synchronous orbit and accessible to hams around the world who can receive telemetry, beacon and science payload data.

The nano-satellite project will focus its studies on near space and will explore the operation of solar sensors, magnetometers, gyroscopes, electromagnets and flywheels used in stabilization and orientation in space. Research will also focus on thermal regulation of a payload using heat pipes and on new software for controlling satellite systems and obtaining telemetry. Frequencies to be used are still being finalized.A 9k6 GMSK UHF downlink is proposed using AX25. --AR Newsline

SPECIAL EVENT STATION COMMEMORATES LAKE SUPERIOR TRAGEDY -- In the state of Michigan, the story of the tragedy cannot be told enough: On November 10th, 1975, an American freighter, the SS Edmund Fitzgerald was sent to the bottom of Lake Superior. The crew of 29 lost their lives that day. That story will be shared once again between October 30th and November 13th by members of the Livonia Amateur Radio Club, K8UNS, as they operate as special event station W8F. On Saturday, November 5th, the operation will also be at the Dossin Great Lakes Museum from 1600 to 2030 UTC. This is also a POTA activation and an entity in the US Islands Awards scheme. The museum and the Detroit Historical Society are hosting the event, hoping that amateurs from around the world will make contact and that visitors to the museum will observe the portable ham station on its day of operation there. Hams who log W8F as a contact will be issued a confirmation certificate.

See the QRZ.com page for special event station W8F for more details. --AR Newsline

THE PACIFIC NORTHWEST SOTA NEWSLETTER IS LIKE AN OUTDOOR TRAVELOGUE, but with radios. In the October-November-December 2022 edition, in addition to some great pictures of radios being used in the outdoors, we learn that many geographical features on public lands are going to be renamed, which will impact Summits on the Air (SOTA) reference manuals, as well as future contests and events. Also in this issue: Some summits have commercial TV or FM radio transmitters that provide so much RF that amateur band receivers in close proximity are overloaded and rendered nearly useless. Tim Sherry, N7KOM, compares two models of bandpass filters for use with amateur-band transceivers, and finds that both would reduce signals outside of the amateur bands.

Barry Hansen, K7BWH, notes on the Pacific Northwest VHF Society email list, that Scott Farrell, KE4WMF, has put together an "excellent" video entitled, "VHF Contest Rover - A Beginner's Journey," showing his VHF contest rover setup in his Volkswagen GTi. He's indexed the over 27-minute video, which makes it easy to get to the part you're interested in. Barry also notes: "If his VW GTi looks familiar, you may have seen it on page 18 of [the] October 2022 [issue of] QST."

KEEPING ELECTROMAGNETIC INTERFERENCE (EMI) OUT OF POWER LINES IS IMPORTANT WHEN USING GENERATORS WITH RADIO GEAR. Jim Brown, K9YC, provides guidance on constructing practical common-mode power-line chokes for this purpose, in his document, "A Ham's Guide to RFI, Ferrites, Baluns, and Audio Interfacing." I recently built a couple of the chokes shown in Fig 30a. If you're building one, you'll need at least 62 inches of Romex-type cable to make one of these with the three cores. In email communication with Jim, he reiterates to not substitute wire type or cores, otherwise you'll be on your own for characterizing the performance of the chokes.

HAMSCI POSTED A NEARLY 2-HOUR SEMINAR BY DR. FRANK HOWELL, K4FMH, ENTITLED, "REVOLUTIONARY ALTERNATIVES IN SUNSPOT PREDICTION," TO THEIR YOUTUBE CHANNEL. The presentation kicks off HamSCI's online talk initiative. Frank's material was also presented in the July and August 2022 issues of the Radio Society of Great Britain's magazine, *RadCom*.

THANKS FOR READING

THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER.